Table A-26. Kentucky Added Turn Lane Crash Reduction Estimates

Category	Number of Estimates	Average Percent Crash Reduction
State Survey Estimates:		
Left-turn (At Signal) (All Crashes)	17	30
Left-turn (At Signal) (LT Rear End)	2	75
Left-turn (No Signal) (All Crashes)	16	28
Left-turn (No Signal) (LT Rear End)	2	87
Right-turn (All Crashes)	5	27
Two-way Left-turn Lane (All Crashes)	21	34
Literature Review Estimates:		
Left-turn (At Signal) (All Crashes)	3	27
Left-turn (No Signal) (All Crashes)	3	30
Two-way Left-turn Lane (All Crashes)	10	31
Researcher's Resulting Estimates:		
Left-turn (All Crashes)	---	25
Left-turn (LT Related Crashes)	---	50
Right-turn (All Crashes)	---	25
Right-turn (RT Related Crashes)	---	50
Two-way Left-turn Lane (All Crashes)	---	30

A study conducted by Creasy and Agent (1985) evaluated a combination of previous research available in literature, 22 state surveys, and a before-after analysis. This study provided a subjective estimate of the influence of the addition of a left-turn lane and concluded there would be:

- A 25-percent reduction in total crashes when there is no traffic signal present,
- A 30-percent reduction when there is a traffic signal, and
- A 30-percent reduction when a two-way left-turn lane is added.

A comprehensive study for the FHWA (Smith et. al., 1983) estimated percent crash reduction for several countermeasures. This study was based on improvements at hazardous locations. The authors emphasize the percent crash reductions estimated are not directly applicable to moderately or mildly hazardous locations. Locations where a turn lane was added resulted in the estimated values shown in the following table.

Table A-27. FHWA Turn Lane Construction Crash Reduction Estimates

Countermeasure	Mean Percent Crash Reduction			
	Total	Fatal	Injury	Property Damage Only
Add turn lanes at signalized intersection	25	15	20	25
Add turn lanes at intersections without signals	60	45	55	65